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THE ACTION OF CAUSES OF DEPRESSION IN THE PRODUCTION OF STRUCTURAL CHANGE; THE PATHOLOGICAL ANATOMY OF PNEUMONIA.

[Read before the Boston Society for Medical Improvement, March 27th, 1865, and communicated for the Boston Medical and Surgical Journal.]

By Calvin Ellis, M.D.

Several months since, the writer reported to the Society the case of a healthy man who fell and fractured one kidney. Double pneumonia followed, and soon terminated in death. Both kidneys were very soft, and under the microscope showed so great a multiplication of the cells of the tubuli that the latter were entirely filled. It was then suggested that the shock caused by so grave an accident manifested itself in disease of a precisely similar character in both lungs and kidneys, viz., a multiplication of cell-elements. To explain this I must refer to what I regard as the true pathological anatomy of pneumonia, as opposed to the description usually given. Repeated observations of my own, corroborated by those of others to whom the point has been mentioned, enable me to state that there can no longer exist any doubt that the usual explanation of hepatization is incorrect. The inflammatory process in the lungs does not differ at all from that in other parts of the body. It is characterized here as elsewhere by the development of cells or nuclei. As hepatization progresses, the fibres of the pulmonary tissue are more and more obscured by granular corpuscles of about the size of pus globules, but generally without the peculiar nuclei, though true pus globules may in some cases appear. The change of color is attributable entirely to the accumulation of these elements and the disappearance of blood. Fibrin is, also, probably formed, but it is not seen in specimens prepared in the usual way. This view is, of course, opposed to the old idea of stages, to which the terms congestion, red and gray hepatization have been applied. *Congestion* does not constitute inflammation, here or under any circumstances, although it generally accompanies it. *Red hepatization* corresponds with that part of the process in which the corpuscles have not accumulated sufficiently to destroy the red color, while they have multiplied so much as to increase the density of the part. *Gray hepatization* implies that the elements have multiplied until they have given their own peculiar tint to the tissue. There is, therefore, no real line to be drawn between the two. The appearances vary infinitely, according to the exact stage of the process.

If the facts be as stated, it is certainly proper to regard the changes in the lungs and kidneys as similar, although the exact portions of pulmonary substance affected have not been ascertained. If it should be shown that the elements of the connective tissue in one case are involved, and in the other the epithelium alone, we must still admit that in both a remarkable development of cell-elements takes place.

In a case of pyæmia, examined a few days since at the hospital, a large part of the right lung presented that firm, blackish, ecchymosed appearance so often noticed previous to the formation of pus. The kidneys were also softened. A microscopic examination of the latter showed the same increase of cells in the tubuli as in the first case. In a third instance, where both lungs were affected with pneumonia, the kidneys showed the same change as that previously reported, and, as in the last case, the bladder contained scarcely any urine.

These three instances are not introduced as sufficient in themselves to prove anything, but we are justified in saying that they suggest the possibility of the production of grave structural disease by causes which deeply affect the system. That various affections are thus produced has always been admitted, but an anatomical demonstration of changes in several parts, which have no apparent connections, has not been given. It is not my intention to assert that the lungs and kidneys are especially liable to such changes. A careful examination of other solid organs may show similar changes in them. Variations in the first two are more readily detected, owing to their peculiarities of structure, but some special preparation of sections of the liver and spleen would be necessary to show an equal amount of change.

If the above conclusions should be substantiated, they would have a very important bearing upon the meaning of some pathological changes now overlooked or improperly connected with symptoms which have long existed. No attempt has been made to give the details of the cases, as they could prove nothing. It is hoped, however, that the attention of others may be directed to the points especially insisted upon, whether to disprove or corroborate them.

REVIEW OF DR. TULLY'S SYNOPSIS OR CLASSIFICATION.

[Continued from page 221.]

STIMULANT, the second mentioned in the list, is perhaps the most objectionable, and may be taken to illustrate the principles to be inculcated or the errors to be avoided in regard to names. Various and widely-different fundamental powers, as well as several secondary or incidental effects, are constantly spoken of as stimulant, while some teachers of medicine maintain that every curative, salutary or truly remedial, is a stimulant effect, thus making the words stimulant and medicinal co-extensive in signification. Alcohol and bloodletting, cinchona and antimony, when they exert salutary or remedial effects are, according to this theory, stimulants. No good can come from thus confounding things so directly opposite.

This term, therefore, has been so loosely and vaguely applied as to be no longer fit for scientific use, and has been so long running at large that any attempt to bring it back and confine it by a definition would be vain. Etymologically it is not wholly appropriate or exactly consonant with the idea to be represented, and consequently were it not for the extreme latitude given it heretofore and the difficulty of confining it now, it would be extremely liable to perversion, or to be differently understood by different individuals.

These must be considered as all-sufficient, though Dr. Tully had one other reason for changing it. The power he intended to designate is the exact opposite of antiphlogistic. The distinguishing characteristic of the one is to increase, that of the other to diminish the vital power. Two things standing in this relation should have cognate names, or names of similar origin or derivation. This may be necessary for precision, or to express with the clearness needed their antagonistic relations. At all events, uniformity in such a case, if not absolutely necessary is desirable; and finally, in every other science, the revision of which has been entrusted to the most competent hands, uniformity in the names of all the classes has been sought and obtained.

The mere matter of taste is not worth alluding to, perhaps, but would it not look awkward and unscholarly to see some of the names of the classes Greek, some Latin, and some English; and ought the man of taste and of undoubted competency who attempts to obviate such a deformity, especially while accomplishing another and still more important object which gives him the opportunity, to be accused of "fastidiousness," "pedantry," or of being "too much given to classical Greek"? It should be observed, moreover, that from time immemorial most of the names for the classes in materia medica have been in analogy with those Dr. Tully suggests; and yet we hear nothing of its earlier cultivators being accused of "an unnecessary display of learning," or of "too much fondness for classical Greek."

Though some substitute for the name stimulant was perhaps the most urgently called for, yet the reasons in this case were the same that existed in others when changes are proposed. But the significance and appropriateness of the new names, their analogy with those to which we have been accustomed and the expediency of adopting them, can be better judged of after examining the entire list of names, their etymologies and definitions. In most of the other cases, however, as in the one just alluded to, it will be seen that the new names cannot be regarded as exact substitutes for the old ones. The ideas themselves, if not new, are more limited and restricted, and require new names to represent them.

The question of adopting or rejecting a name may be as rationally and satisfactorily settled as any other, but the misfortune is, it is very likely to be settled for us, and by those who are unwilling or incompetent to give it the necessary consideration. To object to new names on account of the "embarrassment thereby introduced," would be very like setting ourselves against all changes or improvements on account of the extra labor that would be imposed upon us. Such objections are inadmissible, to say the least, till it has been shown that the actual effect as well as the intention, in either case, will not be to release us of embarrassments and facilitate our labors.

If "unneeded names are unmitigated nuisances," those most eager to "pitch them into the gutter" may not be the best qualified to judge whether they are needed or unneeded. And if we have "a redundancy of names already," this can be attributed to nothing but our having adopted so many that are inappropriate. The way to remedy the evil, therefore, as well as to prevent its constant increase, is obvious. But to disparage such an undertaking by a man of rare qualifications, without fully comprehending its merits, would be to put learning at a discount and ourselves in opposition to the advancement of science.

If science, when allowed, expands and enlarges our ideas, we are obliged to take constant care to limit and restrict them while maturing its details. If "new names do not give new knowledge, do not enlarge our ideas," they may answer the more important purpose of limiting and restricting our ideas, thus rendering knowledge more precise and accurate, besides enabling us to communicate it with accuracy and precision to others.

If Dr. Tully's new names "are without special significance," they must be so to those only who have not examined them closely and compared them with others in this respect; or, perhaps, to those who have not been sufficiently impressed with the evils arising from the use of equivocal or ambiguous terms—"the false ideas and unfounded hypotheses so often involved in accustomed words and phrases," the short and long, but profitless controversies, to say nothing of acrimonious disputes, that may have arisen from a mutual misunderstanding of the parties at the very commencement of their subject, and perhaps as to the precise meaning of a single word. To avoid these and similar evils, truths, and especially fundamental truths, should be expressed in terms as brief, as direct and as unequivocal as possible."

Some have spoken in high praise of Dr. Tully's classification, and considered it far superior to any before offered, but found fault with its nomenclature. This reminds us of the congressman, who, after making a speech strongly in favor of a bill, offers an amendment for the very purpose of defeating it. To us the nomenclature is an essential part of the classification. To reject the one would be to deprive the other of most of its excellencies.

For the new powers, or those for the first time recognized as fundamental, the names must be new of course, and no fault can be found with them for being in analogy with those used heretofore. If "long and hard," they are no more so than those to which we have been accustomed. Nausiatic, neuragic, erethistic, oresthetic, admagic and ergastic are no longer nor harder than cathartic, diaphoretic, diuretic, expectorant, lithontriptic or emmenagogue. To answer the purposes required they must necessarily be uncouth. Nor is leantic more difficult of pronunciation than either demulcent or emollient, of which it is proposed instead. The same may be said of euphrenic as compared with antispasmodic or nervine; antisbestic as compared with stimulant, excitant or incitant; styptic as compared with astringent; antoxyntic as compared with antacid, for which they are proposed as in some sense substitutes. Antisbestic, intended to be the exact opposite of antiphlogistic, is the name substituted for stimulant, though the latter has no meaning, except when the writer or speaker gives his own definition of it. Antisbestic is as short and as easy of pronunciation as antiphlogistic, and the former is no more uncouth than must have been the latter at first. But the question ought not to be decided according to their length, hardness or uncouthness. For the most part, each of the new names has a more precise and definite meaning, and sometimes a meaning essentially different from the old ones.

The reason that names that have been long in use and become popularized have so often lost their precision and acquired an indistinctness and uncertainty of meaning, and thus become unfitted for scientific purposes, is simply because they have never been clearly and accurately defined. Those who will examine Dr. Tully's definitions and compare them with others in this respect, will have no fears that his names, even on passing into general use, will become vague and uncertain, or that on this account there will again be a necessity for a new nomenclature.

We have mentioned all the new names and all the changes proposed by Dr. Tully, have stated his reasons for them, and think them sufficient. It would be easy for any one so disposed to prejudice his undertaking by commenting on the liberty he has taken in this respect, showing the insufficiency of those reasons which he himself admitted were of minor importance, but omitting or perverting those which, if fully and fairly presented, might prove convincing to every intelligent and unprejudiced reader. There would be no apology for those, if there are such, who, after fully comprehending the force and adequacy of these reasons, have nevertheless felt disposed to cater to the general prejudice against changes and innovations by talking about technicalities and abstractions, too much profundity, unnecessary learning, new-coined, long, hard and uncouth words, &c., but all such talk will go for little or nothing with one who thinks closely, who wants evidence and knows when he gets it.

Arrangement of the Classes among themselves.

No one thinks of interfering with the present arrangement of the letters of the alphabet, and yet it may not be the very best that could have been devised. There were, apparently at least, as good reasons for keeping the vowels and consonants distinct, as those of Dr. Tully for dividing the classes of materia medica into five distinct groups. Again, if there would be some advantages in having those most nearly alike in juxtaposition, there would be others in considering those that are most unlike, as in the case of the antiphlogistics and stimulants, one immediately after the other. But as he attached very little importance to this arrangement himself, we shall not adopt it. It will answer our present purpose better to divide them into two groups only, the old and the new; in each of which they will be arranged according to their importance, rather than their similarities or dissimilarities. Upon this subject, however, we may have a suggestion or two to make in passing.

It should be remarked, that the success of such an undertaking is not to be judged of by simply running over the names of the classes. If perfect, this will not be seen at a glance. A true classification, one that would answer all the requirements and be adopted at last, would be very likely to be unpopular at first. There would be two ways of testing its genuineness; first, by becoming familiar with it and realizing its benefits by experience in its use. This would be satisfactory to all, and the only one that would be so to popular minds; second, by a critical examination of its plan, perceiving its adaptation to the purposes intended, comprehending the difficulties that were encountered in its execution and the manner in which they were overcome. But popular minds have no inclination for this kind of research, will look upon the whole of it as so much hair-splitting, and demand, perhaps, that its truth and genuineness should be comprehensible without much study; than which no demand can be more unreasonable. From the nature of the case, until we have realized its benefits by the long test of experience, its truth and value can be known only by the critical examination suggested. Instead of becoming popular at once, it is far more probable that a generation, perhaps a century, would elapse before it would be generally received. But this will dampen the ardor of no true scholar when once impressed with the magnitude of the undertaking, nor reconcile him to the inconveniences he is to suffer till it is accomplished—the thought and labor he is to bestow without sufficiently definite objects in view; the facts he gains without knowing their value, where to put or how to use them; the difficulty he experiences in communicating his own thoughts and in fully comprehending the thoughts of others; his inability to generalize and arrange his knowledge to make it most available for the grand object for which he feels pledged to devote his industry and awake his enthusiasm. He may be encouraged by the hope that when its truth is perceived by a few leading minds, it will be accepted by others, till it comes into more general use, after which its advantages will be developed from year to year, as has happened in similar cases.

Catalogue of the Classes.

OLD CLASSES.

1. Antiphlogistica.
2. Antisbestica *(stimulants, excitants or incitants).*
3. Tonica.
4. Emetica.
5. Cathartica.
6. Diaphoretica.
7. Diuretica.
8. Narcotica.
9. Euphrœnica *(nervines or antispasmodics).*
10. Styptica *(astringents).*
11. Leantica *(demulcents and emollients).*
12. Antoxyntica *(antacids).*

NEW CLASSES.

13. Adenagica *(deobstruents or alteratives).*
14. Erethistica *(acrid narcotics).*
15. Orœsthetica *(acrid stimulants).*
16. Neuragica *(mineral sedatives).*
17. Nausiatica.
18. Ergastica.

Definitions.

Dr. Tully's definitions are said to be far superior to any others, and by those who find fault with his work in other respects. Others think them too prolix. Though in so important a matter as defining the fundamental powers, clearness and precision ought not to be sacrificed to brevity or conciseness, yet he often uses words that are obviously superfluous, some of which we shall omit. It will not be necessary to repeat his definition of the spurious classes.

ANTIPHLOGISTICA is a term composed of a Greek preposition signifying *against*, and a derivative of a Greek verb signifying *to inflame*, and has been in use time immemorial.

Definition.—Antiphlogistics directly diminish vital energy and strength of action in the circulating system, and indirectly lessen vigor generally, thereby diminishing or obviating entonic, sthenic or phlogistic diathesis, when it exists, and (except in the case of depletion of blood and catharsis by the antiphlogistic salts) independent of any evacuation as a necessary part of their operation.

ANTISBESTICA is made up of a Greek preposition signifying *against*, and a derivative of a Greek verb signifying *to extinguish*, *to exhaust*, *to quench*, &c. Antisbesis, i. e., the operation of an antisbestic, signifies *extinction*, *exhaustion*, *quenching*, &c.

Definition.—Antisbestics directly produce a quickly diffused and transient increase of vital energy and strength of action primarily in the sanguiferous or circulating system, and in all the parts dependent upon the nerve of chemical action, nutrition and reproduction, commonly called the great sympathetic nerve; thereby obviating, or contributing to obviate, atony, exhaustion or debility in the parts specified, when it exists.

TONICA is derived from a Greek word signifying *tension*, *firmness*, *strength*, *force*, &c.

Definition.—Tonics are agents which directly produce a slow, gradual and permanent, but moderate increase of vital energy and strength of action of a peculiar character, primarily in a part and secondarily in the whole system.

EMETICA. *Definition.*—Emetics are articles which, when taken into the stomach, independent of odor, taste or bulk, directly produce, *first*, upward peristaltic action of the stomach and œsophagus; *second*, usually a violent and apparently spastic action of the muscles of expression, especially those of the trunk, which is commonly known by the term retching, by means of which there is more or less perfect rejection of the contents of the stomach by the mouth; *third*, increased secretory activity of the mucous follicles of the stomach; and, if the vomiting is violent and protracted, the secretion from the pancreas and liver. In most cases the operation is attended with more or less nausea.

CATHARTICA. *Definition.*—Cathartics directly produce, *first*, a secretion of air into the upper and smaller intestines; *second*, a secretion of serum into the same cavity, both secretions being from the mucous follicles; *third*, an increased secretion from the liver and probably from the pancreas; *fourth*, preternaturally increased downward peristaltic action of the whole intestinal canal, by means of which there are preternaturally frequent and preternaturally liquid alvine discharges.

DIAPHORETICA. *Definition.*—Diaphoretics are articles that by a direct operation upon the cutaneous hydrothermal excretions, restore the elimination of the effete heat of the system in a latent state in combination with water so as to constitute vapor; augment it when diminished; and produce an excretion of mere water when it was previously in a normal state; without any other influence upon any other part of the secernent and absorbent or glandular system, and without increase or diminution of vital energy and strength of action, but merely by an increase of excretory activity.

DIURETICA. *Definition.*—Diuretics are articles which by a direct operation upon the kidneys, restore the excretion of all those effete elements which pass off as salts held in solution by water when suspended, augment it when diminished, and increase preternaturally the proportion of water in this excretion, without any influence upon any other part of the secernent and absorbent or glandular system, and without increase or diminution of vital energy and strength of action, but merely by an increase of excretory activity.

NARCOTICA. This term is not very appropriate. It signifies "*having the property of stiffening, benumbing, or rendering insensible.*"

Definition.—Narcotics, in the *first* degree of their operation, directly allay morbid irritability and irritation, morbid sensibility and sensation, morbid restlessness, jactitation and watchfulness when connected with a non-phlogistic or positively atonic condition of the system; in the *second* degree of their operation they directly relieve pain; in the *third* degree of their operation they produce more or less somnolency or even positive sleep; in the *fourth* degree of their operation they produce vertigo, headache, faintness, dimness of sight, the sensation of a cloud before the eyes or some imperfection of vision, either with great dilatation or extreme contraction, or an immovably fixed but otherwise natural state of the pupils; nausea and retching, with epigastric uneasiness especially when the head is raised or otherwise much moved; small, irregular pulse; cold extremities; cold, clammy or slippery sweats; delirium; convulsions, succeeded by coma and sometimes death.

EUPHRÆNICA. This term is derived from a Greek word signifying *to gladden, to delight, to cheer, to amuse, to render gay, to exhilarate.* Euphrasy may be used to denote the effects of a euphrenic.

Definition.—Euphrenics in the *first* grade of their operation obviate languor and lassitude when they exist; *second,* produce a peculiar calm, placid and pleasant state or condition; *third,* a peculiar and rather agreeable preternatural wakefulness; *fourth,* more or less positive exhilaration, which by some articles is increased to such a degree that the actions of the subject are not under the control of his will, and perhaps amount to actual delirium; *fifth,* a complete anæsthesia or destitution of common sensation, or a state of insensibility to pain, sometimes with and sometimes without loss of consciousness.

STYPTICA is derived from a Greek verb signifying *to constringe, to constrict, to contract, to condense, to thicken, &c.* Stypsis denotes the effects of a styptic.

Definition.—Styptics are articles which produce a vital contraction and condensation of the soft solids, together with increased absorption and diminished excretion, particularly in diseased parts.

Leantica is an ancient Greek word which signifies *alleviating, assuaging, calming, soothing, &c.*

Definition.—Leäntics are articles which independent of antiphlogistic, neuralgic, narcotic or euphrenic powers, but by virtue of a peculiar impression made by a mucilaginous, amylaceous, saccharine, oleaginous or gelatinous principle, or by heat and moisture conjoined, or some combination of these, allay irritation in various parts, alleviate phlogistic soreness, swelling and pain, and contribute either to a resolution or suppuration according to the stage or other circumstances of the case.

Antoxyntica. *Definition.*—Antoxyntics are articles which combine with and neutralize free acids in the alimentary canal.

Admagica is derived from a Greek noun signifying *a gland*, and a Greek verb signifying *to affect, to influence, to control, to conduct, to rule, &c.* Etymologically it signifies articles which influence the glands or the glandular system.

Definition.—Admagics are articles which exert a direct and specific operation upon the secernents and absorbents or glandular system, by which a greater or less change of action or condition is produced—a change manifested by a direct revolution of certain chronic, subacute and acute atonic phlogoses or inflammations; certain parabysmata and glandular enlargements; by the obviation of certain dysthetica; by the improvement of certain vitiated ulcers; by the relief or cure of certain cutaneous diseases; by the obviation of torpor and inactivity of all the secretions and excretions; and also by a diminution and improvement of the secretions and excretions when they are excessive and vitiated; the whole independent of any change in the degree of vital energies or strength of action in the sanguiferous system, and not caused by any evacuation which may happen to be produced.

Erethistica signifies *provoking, irritating, exciting, &c.*; but is not to be understood in its loose etymological sense, any more than narcotic.

Definition.—Erethistics are articles which produce a preternatural degree of activity and an augmented exertion of the powers and energies by which any function is discharged. A mere and pure erethistic agent may indeed be correctly compared to the whip and the spur, which do not give any new and additional power or energy, but only bring into greater activity that which already exists—which was not previously exerted to the same extent—and which was perhaps latent or prostrated in a greater or less degree. This is applicable only to mere and pure erethistics. It is not by any means true of antisbestics and tonics, as is so often alleged. The more active erethistics when pushed to a certain extent produce stupor or numbness in some part of the system, attended with imperfection in the sense of feeling or a prickling sensation like that of a limb when it is said to be asleep, and with imperfect obedience of the muscles of voluntary motion to the influence of the will. The next grade of an erethistic operation is characterized by the occurrence of spasms or convulsions of different kinds, according to the article used.

OROESTHETICA is composed of a Greek verb signifying *to arouse, to stir up, to awaken, to excite*, &c., and a Greek attribute signifying *susceptible, sensible*, &c. Orœsthesis signifies the effects of an orœsthetic.

Definition.—Orœsthetics, when taken internally, act immediately upon the mucous membrane of the alimentary canal, and by textural sympathy upon all the other mucous membranes; in the *first* degree of their operation changing action or condition in all these membranes; on the one hand obviating torpor and insensibility; on the other hand obviating morbid irritability and sensibility; relieving laxity and spongy turgescence; increasing deficient secretions, diminishing excessive ones, and favorably changing vitiated ones, when connected with prostration and atony, and not with phlogistic diathesis; disposing aphthous affections and other ulcerations to heal, and augmenting healthy susceptibility; in the *second* grade of their operation occasioning a submorbid degree of irritability and sensibility; in the *third* stage of their operation kindling into action a phlogosis or inflammation of the erethematic sort; in the *fourth* stage of their operation occasioning ulceration and suppuration; in the *fifth* stage of their operation extinguishing vitality, i. e., producing gangrene.

NEURAGICA is derived from a Greek substantive signifying *a nerve*, and a Greek verb signifying *to affect, to influence, to control, to rule, to lead, to conduct*, &c.

Definition.—Neuragics are articles which, without either euphronic, narcotic, leäntic or antiphlogistic powers, operate primarily upon the nervous system; some of them, in the *first* degree of their operation, efficiently allaying, in a manner peculiar to themselves, morbid susceptibility and sensation and irritative action, without vertigo or general tremors; while others produce more or less vertigo and general tremors, but at the same time obviating, or contributing to obviate spastic or convulsive diathesis; *second*, they occasion more or less languor, lassitude and prostration, more or less neuralgic pain, more or less palpitation of the heart and arteries, more or less torpor as respects the peristaltic action of the intestines, more or less stupor or numbness in some parts of the extremities, sensations of constriction in the feet and hands, peculiar weakness in the lower extremities, many symptoms resembling chorea, morbid wakefulness, &c.; *third*, violent neuralgic pains in various parts of the body and limbs, great anxiety, general agitation, spastic or convulsive affections, obtuseness of the special senses or positive abolition of them, dilatation of the pupils, emaciation, paralysis of the extremities, delirium, general exhaustion and sometimes death.

Nausiatica. *Definition.*—Nausiatics are articles that produce a distressing variety of common sensation called nausea, sea-sickness or sickness at stomach, having its seat in the stomach, always attended with a loathing of food and a tendency to vomiting, and always aggravated by motion or exertion. It is often produced by the motion of a ship in a high wind, by swinging, whirling, &c. It is often a precursor of vomiting; often a symptom of pregnancy, and occurs very frequently as a symptom of various diseases—gastritis, enteritis, diarrhœa, &c.

Ergastica is an ancient Greek term, having reference to *work*, *labor*, &c.

Definition.—Ergastics are processes or agencies which mechanically agitate and exercise the whole body in such a manner as to contribute to the restoration of health, under certain circumstances.

[To be continued.]

GLYCERIN.

By W. J. M. Gordon, Cincinnati.

When I accepted this subject at the last meeting of the Association, I expected to have given to it more attention than my time during the past year would permit. Not having investigated it as thoroughly as desirable, I will present what I have accomplished in connection with much that is not new, so as to present it as fully as possible, and leave it for the experiments and suggestions of all who may be interested in it.

Glycerin, it is generally known, possesses a wonderful range of solvent properties, dissolving many substances not soluble in alcohol or water. Its agreeable taste, harmless action upon the system, and perfect assimilation with human digestion, specially adapt it when other substances would be rejected. Its sweetening property being almost equal to cane-sugar syrup, but differing from it in not being liable to fermentation; resembling oils, but, unlike oils, miscible with alcohol and water in any proportion; not volatile at ordinary temperatures, and not becoming hard at the freezing point of mercury. Possessing these properties, it cannot but be an article of importance both in pharmacy and in the arts.

The high price heretofore, no doubt, has kept it from many uses to which it is now applied. Recently glycerin, adapted to the various purposes to which it is extensively used, has been produced at a lower price than alcohol, sugar, or oil, which it has come in competition with, and which places it seems specially adapted to fill to a considerable extent; and the large amount and low price at which it can be produced, make it worthy of attention at a time particularly when every article of utility should be carefully looked after.

Medicinally, glycerin has been used for its nutritive and alterative effect, and in some cases with marked success, being admissible when cod liver oil and other unpleasant substances would be rejected. These, and its soothing effect in coughs, are the principal internal uses to which it has been applied alone. Its more important medicinal value is as a vehicle for the preparation of a great variety of remedies for both internal and external use.

It is a favorite article in combination with the hypophosphites—known as glycerole of hypophosphites; and never disagreeing with the most delicate stomach, as sugar is liable to do, is admissible when syrup is not.

Iodide of iron prepared with it in the place of syrup, makes a handsome and permanent preparation.

Its preservative and solvent property being so much greater than that of sugar syrup, cannot fail to recommend it in the place of that substance for the preparation of ipecac, senega, hive syrup, and such vegetable preparations as are liable to fermentation: specimens of several I now exhibit made with glycerin, costing $2.00 per gallon, which are elegant in appearance, and will undoubtedly remain without change an indefinite length of time.

Its uses externally are numerous. For chapped skin and rough and excoriated surfaces it has no equal; for sore nipples, skin diseases, ulcers of various kinds, to prevent excessive suppuration, and cleanse the secreting surface.

It is highly recommended in deep abscesses with diseased bone, combined with iodine, which it dissolves. With many it is a favorite mode of applying iodine and its salts.

It is used in cerates and ointments, which do not become rancid so soon when combined with it; as glycerole of lead, in place of Goulard's cerate, glycerin being used in the place of wax and oil; as glycerole of kino; which is said to be unchangeable; in the preparation of lactucarium in a liquid form, by which its activity and reliability are more certain; as glycerole of aloes, tar and arnica for external use. It is used with starch in the proportion of 1 oz. of glycerin to 70 grs. of starch for making an article called "plasma," as a substitute for lard or cerate. And it no doubt possesses advantage in preparing vegetable extracts, such as belladonna, aconite, and others for external use, as they can be readily mixed with it; for liniments, in the place of oil, as it will not become rancid; and has been suggested for the extraction of the active principles of vegetable substances in place of oil and fats, to be used in the preparation of cerates or ointments.

Incorporated with vegetable extracts, it will prevent mouldiness and keep them soft, and for pill masses liable to become hard it is a good addition. It may be used as an addition to poultices to keep them soft, or any article to be kept in a moist or plastic condition.

Its solvent and preservative properties are of great importance to the pharmaceutist. In the preparation of fluid extracts it will be found to supply the place of alcohol and sugar to much advantage. My experience is such as to convince me that in most cases extracts will be more permanent by supplying the place of alcohol, used to preserve them, with glycerin. To fluid extract of jalap, veratrum viride, cinchona aromat. and iris versicolor, glycerin was added and all the alcohol evaporated out, specimens of which I now exhibit, presenting a handsome appearance. Sarsaparilla and those liable to fermentation will be much better preserved with it.

I have used glycerin as a menstruum in the preparation of extracts of cloves, nutmegs, and Ceylon cinnamon, and the preparations are elegant representatives of the substances from which they were made.

It dissolves the vegetable acids, most of the vegetable alkaloids, sulphuret of potassium, permanganate of potassa, sulphate of copper, zinc, iron, and potassa, alkaline and some of the metallic chlorides;

Iodide of ammonium, cadmium, zinc, potassium, sodium, lime and manganese;

Freshly precipitated carbonate of iron;

Most of the metallic oxides to some extent;

Nitrate of potassa, silver, copper, and lead;

Citrate of iron, citrate of iron and quinine, citrate of iron and strychnia, tartrate of iron and potassa;

Pyrophosphate of iron, and most saline substances.

Heating to give it greater fluidity will generally increase its solvent property.

It may not be amiss to name other purposes for which glycerin is largely used. Much the largest quantity used for any one purpose, except that for filling gas metres, is in the manufacture of hair oils, tonics, and washes, for which it is admirably fitted, taking the place of alcohol and castor oil, which are now too expensive for the purpose, and by its undrying property keeping the hair moist in appearance.

It is largely used in tobacco, and is particularly adapted to the article known as fine-cut, preserving it in a moist state an indefinite length of time; and, unlike sugar, molasses, and infusion of liquorice, which have been used for the same purpose, it will not turn sour, and is unchanged by exposure to the air.

Wine and liquor manufacturers use it to improve liquors, by giving body and removing the fiery taste.

It is used by manufacturers of woollen goods in place of oil, being more economical and not requiring soap to wash it out.

Manufacturers of cotton goods use it in size to prevent rapid drying.

Printers use it in place of molasses to make rollers, which will not dry and shrink.

It is used by artists in clay and plaster of Paris to preserve it in a plastic form for modelling.

It is used in soaps.

For filling wet metres, used in measuring illuminating gas, it is now extensively used, and possesses decided advantage over whiskey or any substance before used for the purpose. It is practically free from any objection, not evaporating at any ordinary temperature, and can be sufficiently diluted to prevent its absorption of more water from the gas, and not liable to freeze at any degree cold metres are subject to, and rendering them free from the attention necessary if filled with whiskey or water.

It deserves attention as a lubricator for fine machinery, not congealing or being affected by exposure to the atmosphere.

Numerous other applications have been made of it, and its uses will increase as its wonderful properties become known.—*American Druggists' Circular*, from *Proc. of Am. Pharm. Assoc.*, 1864.

Bibliographical Notices.

Glaucoma; its Symptoms, Diagnosis and Treatment. By PETER DIRCK KEYSER, M.D. Philadelphia: Lindsay and Blakiston. 1864.

THIS is a little pamphlet of 88 pages, neatly printed on yellow tinted paper, rendering a book always so pleasant to read, especially at night by artificial light. Don't the book publishers generally know of this fact yet?

The author says, in his preface, "I have chiefly followed the views of Prof. A. von Graefe, of Berlin, in the diagnosis and treatment of this disease; indeed, we are mainly indebted to his admirable and important researches for the elucidation and treatment of this and many other diseases of the eye."

"The substance of this work is from my notes taken while attending the clinical lectures of Prof. Von Graefe, during the winter of 1863 and 1864, in Berlin, and I have compiled and published them, thinking that they would not only be of interest, but of advantage to the medical profession in this country."

Now we recommend this pamphlet to every surgeon and general practitioner, but we must more highly recommend "J. Soelberg Wells's Four Lectures on Glaucoma and Iridectomy," delivered at the Middlesex Hospital, published in London, April, 1864, from which Peter Dirck Keyser, M.D., *has copied his pamphlet word for word, and not only not added anything, but left out some important portions and all the plates in explanation of the operation of iridectomy, &c.* Had the *editor*, not *author*, simply republished Mr. Wells's book without credit, that would have been bad enough, but to boldly state that the pamphlet is "his notes of Graefe's lectures," is rather too severe. This barefaced plagiarism seems to have escaped the notice of our cotemporaries, judging from the very favorable notices of this pamphlet which we have seen in some of them, in which no allusion is made to it.

We therefore call the attention of our professional brethren to this high-handed procedure, and take the liberty in their name of apologizing to Mr. Wells for this insult to himself. We are not informed with regard to the professional status which Peter Dirck Keyser has hitherto held, nor of his place of residence. If he has any legitimate connection with the medical profession, this infamous act calls for immediate action from his associates. J.

The Principles and Practice of Ophthalmic Medicine and Surgery. By T. WHARTON JONES, F.R.S. Third and revised American Edition, with additions, from the Second London Edition. Philadelphia: Blanchard & Lea.

THE few editorial notes added render this very little better than the second edition, published in 1857. It does *not* "bring the work up to the present state of knowledge in the important department of medicine and surgery of which it treats." There was a great opportunity to do this, for the English, French and German literature has been very abundant upon the important advances of ophthalmology. We do not think, therefore, that there was any excuse for slurring over such subjects as the Ophthalmoscope and its various forms, Accommodation and Refraction of the Eye, Glaucoma and Iridectomy, Strabismus and its connection with the refractive State of the Eye. The test types do *not* correspond to Prof. Jäger's (p. 61). The plates, as we of course must expect, are worn out, and not to be compared with those of the English edition. The ophthalmoscopic plates are eminently bad. There are certainly plenty of moderately good ones that might have been copied.

Now for want of a better, this book is the one given to each U. S. hospital for the surgeons to keep themselves posted in ophthalmic medicine and surgery. It really seems a pity that such an opportunity could not have been seized to acquaint the profession so largely employed under the Government with the truly very great advance in ophthalmic scientific research. The time must come when the surgeons, at least of the regular army, will be *forced* to make themselves familiar with the ophthalmoscope and the anomalies of refraction and accommodation, as these subjects bear so immediately upon the "examination of recruits" and "malingering." Unfortunately, they will not be able to do so from this edition of Mr. Jones's work. Had only these two topics been properly treated in the editorial additions, we should have hailed this edition with much more pleasure. J.

IN the Pennsylvania Hospital for the Insane, at the date of the report of the Physician, 1863, there were 285 patients, since which 183 have been admitted and 189 have been discharged or died, leaving 279 under care at the close of the year. The total number of patients in the hospital during the year was 468. The highest number at any one time was 306; the lowest was 270; and the average number under treatment during the whole period was 286. Of the patients discharged during the year 1864, were—cured, 84; much improved, 15; improved, 43; stationary, 30; died, 17.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: WEDNESDAY, APRIL 19, 1865.

The Nation's Mourning.

In this dark hour of our nation's great calamity and grief, when the appalling deed of crime weighs like a nightmare upon every breast, we could not, even if we would, address our readers on any other topic than that which is the foremost in all our hearts. We live in a time of extraordinary events and unlooked-for catastrophes. The unbounded and inexpressible exultation of one day gives place to the immeasurable sorrow of the next. The joyous emotions which thrilled the nation but one short week since to the most extravagant demonstrations at the seemingly near prospect of peace, are changed into the unutterable horror of to-day. Truly it is time for man to feel his own weakness and blindness, and to stand confounded and dumb before the inscrutable decrees of the Majesty of Heaven.

To-day is the day appointed for the funeral obsequies over the remains of our late beloved President, and the universal badges of mourning, and more the signs of personal grief on every countenance, show how all-pervading and sincere is the sorrow which has bowed down this nation as no other nation was ever stricken before. Who can tell the issue of these solemn events? Where is the prophet who can foresee the consequences upon the whole nation, to which this awful crime, which has pierced its very heart, may lead? The whole experience of the past four years has been filled with occasions to remind us how utterly futile were our attempts to penetrate the future, to impress upon us the sense of the ever-present and over-ruling power of the Most High; but no lesson which this people has before received has brought home this vital truth to every heart with such irresistible power as that which crushes us now.

It would be out of place for us to attempt to discuss here the agencies which may have been concerned in planning and executing the dastardly act which deprives this nation in an instant of one whom each added day of his presidential service only made the dearer to the thousands who admired and revered him. With what heartfelt satisfaction have we beheld him winning over to his side from day to day many who in times past distrusted or opposed him, until now, in the fearful hour of his atrocious assassination, spontaneous and heartfelt tributes of real confidence and affection are heard almost without a dissenting voice throughout the land! There is much to comfort and sustain us under the pressure of this dire calamity in the thought that, in spite of so much opposing prejudice, and with so few of those external graces of person and manner which have such an immense influence when bestowed upon the head of a nation, the simple, honest worth, and purity of purpose and principle of our late Chief Magistrate have won for him a place in the hearts of our people second to none ever held by any earthly leader. It shows that notwithstanding our many iniquities and shortcomings we are still at the very centre loyal to the highest and truest greatness. God grant that we may come out of this fiery trial through which his inscrutable Providence is leading us, to a new, stronger, and more noble life, fitting us for a leading place as a great, Christian nation!

Sudden Death in Labor.—We have received from Dr. M. W. Case, of Chicago, the following interesting account of sudden death in labor; the particulars were furnished to him by the husband of the unfortunate lady, a clergyman and friend of his. This gentleman in a letter to Dr. Case, speaking of his wife, says:—

"She had been uncommonly well for one in her situation up to the very day of her death. She helped about the house the day before, and got up as usual that morning, but thought she had better lie down again, as there were symptoms of approaching labor. The family physician was called in to see her, and he thought she would probably be sick soon. She had slight pains during the day, which in the evening grew more frequent and severe, but there was not a single bad symptom. We all thought she was doing well, and she was hopeful.

"Between 9 and 10, P.M., I was sitting by her side, when she was taken with a hard pain, and suddenly something seemed to give way, with a sound. She exclaimed, 'what was that? I never was so before.' I spoke to the doctor, who came to the bedside and said that all was right, 'there is nothing amiss.' She exclaimed, 'it seems as if my head would fly off my shoulders,' and immediately had a severe spasm; her face became almost black, and in a moment, without another word or groan or struggle, she was gone. We applied ammonia, put her feet in hot water, and the doctor tried to open a vein, but all to no purpose—she had gone, life was extinct. It seemed to us like putting an extinguisher on a candle. None of us had ever witnessed the like, the doctor had never seen such a case, and we were wholly unprepared for such an issue." Dr. Case adds:—

"This is probably one of those cases in which no human skill could have been of any avail; but such accidents have a lesson for all whose duties call them to the lying-in room. Will the Editors of the Journal please give an opinion as to the probable cause of the sudden death of Mrs. S.?"

It does not seem difficult to us to frame a plausible theory of the cause of death in the distressing case above narrated. It does not appear that there was any necessary, or at least direct connection between the "sound" mentioned and the cerebral symptoms which proved so suddenly fatal.

That death was caused by apoplexy would hardly seem to admit of a doubt. The severe convulsion, the immediate loss of consciousness, the congestion of the vessels of the face, all point to a sudden and overwhelming overflow of the central seat of sensation and life. What was the strange sound just preceding these symptoms?

This sound, it appears, was coincident with a severe pain. "Suddenly something seemed to give way." The lady, in alarm, asked what it was, and said she had never had such an experience before. It is not stated how many labors the patient had gone through previously, but our informant speaks of having attended her two years before in a natural labor, the child of which was still living and healthy. To our minds it seems probable that the sound in question was caused by the rupture of the membranes and the sudden escape of the liquor amnii. Every accoucheur is familiar with the rushing noise which a large amount of this liquid produces when the membranes, perhaps unusually strong, suddenly give way under the pressure of a violent pain. It is also an occurrence very likely to startle the patient when experienced for the first time. Such an abrupt, rushing escape of the waters is not very common in obstetric practice, because physicians generally break the membranes as soon as the mouth of the womb is properly dilated, and the liquid comes away more gradually. In the present instance it may very well have been the case that in the first labor this was done by the attending physician, and the lady consequently had not the same experience; or the quantity of *liquor amnii* may have been much less. In the second labor the patient was under the charge of another physician, who may not have aided the labor by rupturing the membranes. The sound was coincident with a severe pain—such a pain as brings into action all the expulsive power of the patient. The breath is suspended, every muscle is brought into extreme tension, the return of the blood from the brain is almost stopped by the fearful concentration of power to force the child into the world; the eyes are suffused, the whole face is turgid with blood; and we think we speak to the experience of every physician who has witnessed such a scene, when we say, that it seems at such times only wonderful that the vessels of the brain are ever able to bear such a strain. We know that we have often begged patients to desist, if possible, from such terrible efforts at expulsion, for fear of this very accident.

With the few facts then, given us above, it seems highly probable, that the death of this estimable lady was occasioned by apoplexy, caused by the violent expulsive efforts of a powerful pain accompanied by the sudden escape, with an audible sound, of a large quantity of liquor amnii. We should be glad to receive any expressions of opinion from our readers on this interesting case.

AT the regular weekly meeting of the Chicago Medical Society, March 11th, 1865, Dr. Hildreth, Surgeon to the Desmarres Hospital in this city, for the treatment of soldiers affected with diseases of the eye and ear, presented to the Society a soldier, about 20 years of age, with a striking want of development in his external auditory apparatus. Both external ears were very small and imperfect in their formation, and the external auditory canals or meatus were entirely *absent*, both in the soft parts and the temporal bone. Yet the individual could hear ordinary conversation without difficulty. The defect was congenital. During the discussion to which this case gave rise, Dr. Hildreth mentioned the case of a soldier who had become deaf, from supposed anchylosis of the small bones of the ear, but whose hearing was restored by a severe concussion; and Dr. Davis alluded to a case, which had been reported to him about two years since, of congenital deafness—the individual having been educated as a deaf mute; but to whom hearing came during the progress of an attack of severe *variola*, occurring after the patient had attained the age of 45 years.—*Chicago Medical Examiner.*

Mortality in the French Army.—Statistical tables are now annually published of the above mortality. The figures for 1862 stand as follows:—The whole army numbered 372,166 men; of these, 13,393 were stationed in Italy, 54,040 in Algeria, and 304,733 within the French limits. It is a pity that the regiments employed in Mexico and in the colonies are not included in the tables. The mortality in 1862 was 10·1 per thousand soldiers; the proportions as to localities being, for the home army, 0·0094; for Algeria, 0·0122; and for Italy, 0·0177. These results are certainly cheering, as Benoiston's tables show, from 1820 to 1830, a mortality for the home forces of 20 per thousand; and it was no less than 19 per thousand so late as 1846. It is remarkable that the men quartered in the Papal States lost 237 individuals, whilst the same number in France lost only 126.—*Lancet.*

There were fifteen graduates at the late commencement of the Philadelphia Dental College.

The annual commencement of the Philadelphia College of Pharmacy took place recently, and the degree of Graduate in Pharmacy was conferred on twenty-nine gentlemen—all Pennsylvanians, it is stated.

At the sixth annual commencement of the Chicago Medical College (Medical Department of Lake Forest University) the degree of M.D. was conferred on twenty-six graduates—Prof. N. S. Davis acting as President of the Faculty. The ad eundem degree was also conferred on four candidates, and the honorary degree on one.

From the Annual Report of the Superintendent of the Wisconsin State Hospital for the Insane we learn that:—The number of patients remaining Sept. 30, 1863, was 188; there have been admitted during the year, 112; making the number enjoying the benefits of the hospital, 300. There have been discharged, 130. Of those discharged there have recovered, 56; improved, 21; not improved, 36; died, 17.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, April 15th, 1865.

DEATHS.

	Males.	Females.	Total.
Deaths during the week - - - - - - -	43	29	72
Ave. mortality of corresponding weeks for ten years, 1853—1863,	36.8	37.1	73.9
Average corrected to increased population - - - - -	00	00	80.85
Death of persons above 90 - - - - - - - - -	1	0	1

Died,—At Newbern, N. C., Dr. Dixi Crosby Hoyt.

Deaths in Boston for the week ending Saturday noon, April 15th, 72. Males, 43—Females, 29. Accident, 1—inflammation of the bowels, 1—congestion of the brain, 1—disease of the brain, 4—inflammation of the brain, 1—cancer, 2—consumption, 17—convulsions, 5—diabetes, 1—dropsy, 1—dropsy of the brain, 3—drowned, 1—dysentery, 1—fever, 1—scarlet fever, 1—typhoid fever, 1—gastritis, 1—disease of the heart, 1—infantile disease, 2—disease of the kidneys, 1—congestion of the lungs, 1—inflammation of the lungs, 3—old age, 3—paralysis, 1—premature birth, 2—smallpox, 6—suicide, 1—teething, 1—tumor, 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 31—between 5 and 20 years, 8—between 20 and 40 years, 20—between 40 and 60 years, 9—above 60 years, 4. Born in the United States, 50—Ireland, 17—other places, 5.